

WE CLAIM:

1. A method of preparing a composition comprising the steps of:
- a) inserting a gene coding for a heterologous gene product into an expression vector;
  - b) transforming said expression vector into a commensal *Neisseria*;
  - c) expressing said heterologous gene product in said commensal *Neisseria*;
  - d) obtaining an immunogenic component or extract from the *Neisseria* of (c); and
  - e) combining the immunogenic component or extract of (d) with a pharmaceutically acceptable carrier.
2. The method of claim 1, wherein said commensal *Neisseria* is selected from the group consisting of *N. cinerea*, *N. lactamica*, *N. elongata*, *N. flava*, *N. flavescens*, *N. polysaccharea*, *N. sicca*, *N. mucosa*, *N. perflava* and *N. subflava*.
3. The method of Claim 1, wherein the commensal *Neisseria* expresses a gene or a fragment thereof from a pathogenic *Neisseria*.
4. The method of Claim 3, wherein the commensal *Neisseria* expresses a gene which encodes a protein from *N. meningitidis* selected from the group consisting of transferrin binding protein; a Cu,Zn-SOD; an NspA; a porin; an outer membrane protein and fragments thereof.
5. The method of Claim 1, wherein said obtaining comprises:-
- (i) suspending said commensal *Neisseria* cells in the presence of detergent; and

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- (ii) incubating the suspension so as to extract a protein fraction from the cells.

6. The method of Claim 5, wherein the protein fraction is of molecular weight 50kDa or lower.

7. The method of Claim 5, wherein the protein fraction is of molecular weight at least 40kDa and up to 90kDa.

8. The method of Claim 5, wherein the protein fraction is of molecular weight at least 80kDa.

9. A method of preparing a composition, comprising:-  
a) expressing a gene in a commensal *Neisseria*, wherein said gene is a gene not found in wild type commensal *Neisseria* and said gene encodes a heterologous product; and  
b) extracting said heterologous product from said commensal *Neisseria*.

10. The method of Claim 9, comprising combining said heterologous product with a pharmaceutically acceptable carrier.

11. The method of claim 10, wherein said commensal *Neisseria* is selected from the group consisting of *N. cinerea*, *N. lactamica*, *N. elongata*, *N. flava*, *N. flavescens*, *N. polysaccharea*, *N. sicca*, *N. mucosa*, *N. perflava* and *N. subflava*.

12. The method of Claim 9, comprising extracting an outer membrane fraction from said commensal *Neisseria*.

13. The method of Claim 9, wherein said gene encodes an antigen which when administered in a vaccine confers protection against meningococcal disease, and the method comprises administering an effective amount of said composition to a patient to confer protection against meningococcal disease.

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14. The method of Claim 9, where said gene encodes an antigen or a fragment thereof from a pathogenic *Neisseria*.
15. A method of preparing a composition comprising:
- inserting a gene coding for a heterologous gene product into an expression vector;
  - transforming said expression vector into a commensal *Neisseria* so that said heterologous gene product is expressed in said *Neisseria*; and
  - combining the *Neisseria* of (b) with a pharmaceutically acceptable carrier.
16. The method of claim 15, wherein said commensal *Neisseria* is selected from the group consisting of *N. cinerea*, *N. lactamica*, *N. elongata*, *N. flava*, *N. flavescens*, *N. polysaccharea*, *N. sicca*, *N. mucosa*, *N. perflava* and *N. subflava*.
17. The method of Claim 15, wherein the commensal *Neisseria* expresses a gene or a fragment thereof from a pathogenic *Neisseria*.
18. The method of Claim 17, wherein the commensal *Neisseria* expresses a gene which encodes a protein from *N. meningitidis* selected from the group consisting of transferrin binding protein; a Cu,Zn-SOD; an NspA; a porin; an outer membrane protein and fragments thereof.
19. A composition obtained by the method of Claim 1.
20. A composition obtained by the method of Claim 9.
21. A composition obtained by the method of Claim 15.